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TECH CENTER 1600/2900

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the application of:	)	Appeal No.: _____
	)	
Eric S. Abrutyn, Louis J. Scarfo	)	Group Art Unit: 1203
and Richard C. Chromecek	)	
	)	Examiner: Dale R. Ore
Serial Number: 08/058,163	)	
	)	
Filed: May 4, 1993	)	
	)	
Title: Lattice-Entrapped	)	
Composition	)	
	)	
Docket Number: DC 3914	)	September 12, 1994

APPELLANTS' BRIEF UNDER 37 CFR 1.192(a)

Commissioner of Patents and Trademark  
Washington, D.C. 20231  
Attention: BOX AF

Sir:

This is an appeal from the Final Rejection dated September 6, 1994, in which the Examiner finally rejected Claims 1-19. Appellants' claims have been twice rejected and the appeal is proper under 35 USC 134.

STATUS OF CLAIMS

Claims 1-19 were originally filed in the application, and remain the only claims pending in the application. These claims were finally rejected and are the subject matter of this appeal.

STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection under 37 CFR 1.116.

### **SUMMARY OF THE INVENTION**

As shown in the picture on Page 3 of appellants' enclosed publication "Material News" dated July/August 1990, farmers can now deliver pheromones to their fields in a targeted way, by entrapping the pheromones in appellants' solid polymer. Because the polymer is a solid, it is sprayed with the pheromone entrapped inside, and delivered to the farmer's field by a crop duster, without loss of liquid due to the drifting and shifting wind currents found in rural areas.

This solid polymer is the subject of the present invention, and it is simply a cross-linked polymer containing the pheromone. Because the polymer is cross-linked, it is a solid. Cross-linking monomers are used to make the polymer, and these monomers are called for in Claims 2 and 3. The pheromone is entrapped inside the solid polymer by "being polymerized in situ" with the monomers, and this feature is recited in Claims 1 and 15-19.

Thus, liquid pheromones can be entrapped in a solid polymer whilst the polymer retains its free flowing solid characteristic, and the nation's farmers can deliver their insect control liquids to plants and crops, without incurring monetary losses of the liquid due to misting.

### **ISSUES**

There are three issues for consideration by The Board of Patent Appeals and Interferences. The first issue is whether the claims are indefinite under Section 112. The second issue is whether the reissue declaration is defective. The third issue is whether Claims 1-19 are patentable over British Patent GB 1336495 (Ciba-Geigy) under Section 103.

**GROUPING OF CLAIMS**

Claims 1-19 stand or fall together as a group.

**ARGUMENT**

Claims 1-19 are not indefinite under Section 112. The term "solid" in line 1 of Claims 1 and 15-19, refers to the "entrapped composition", and not the "pheromone". This can be verified by reference to the "ABSTRACT" on the first page of appellants' printed US Patent 4855127, which describes the "compositions" as "solid" and as "solid, free-flowing forms". Reference can also be had to Column 1 line 17 in appellants' printed specification where the "composition" is said to be "solid"; and to Column 3 lines 3 and 4, where again, the "compositions" are said to be "solid". Finally, appellants' US 4855127 in Column 5 lines 34-49, clearly explains the conversion of liquid functional materials into free flowing solids, by entrapment and incorporation of a liquid functional material into the polymer. Thus, appellants fail to see wherein the claims are indefinite and confusing as alleged by the Examiner.

The reissue declaration is not defective. The pheromones set forth in Claims 13 and 14 are clearly described in the record as liquids. Thus, the compound in Claim 14 is the same as "trimedlure", and this fact is noted in appellants' printed specification in Column 10 lines 4 and 5. The compound in Claim 13 is the same as "Grandlure", and again this fact is noted in appellants' printed specification in Table II in Columns 13 and 14. Appellants have previously filed and made of record in this application for reissue, evidence showing that both "trimedlure" and "Grandlure" are liquids. Therefore, if "trimedlure" and "Grandlure" are liquids, and if "trimedlure" and "Grandlure" are the same as the compounds recited in Claims 13 and 14, then it follows

that the compounds in Claims 13 and 14 must also be liquids. Accordingly, appellants fail to see wherein their reissue declaration is defective as alleged by the Examiner.

Claims 1-19 are not unpatentable over British Patent GB 1336495 (Ciba-Geigy) under Section 103. The British patent does not teach the claimed subject matter, because it fails to describe a composition that is a "cross-linked" polymer; and a polymer in which a pheromone is "entrapped" in the polymer by "being polymerized in situ" with cross-linking monomers making up the polymer. These features are absent from the British Patent.

In contrast to the claimed composition, in which a liquid pheromone functional material is "entrapped" in a "cross-linked" polymer by "being polymerized in situ" with cross-linking monomers of the polymer, the British Patent first prepares a polymer separately from the liquid functional material, and then places the separately prepared polymer in a container in contact with a liquid functional material. According to the British Patent, the container is then sealed by welding the closure of the container, and the polymer and the liquid functional material are stored in the container for a minimum storage time of 3 to 30 days. No entrapment by in situ polymerization is described in this British reference.

Furthermore, there is nothing in the British Patent to indicate that the polymer is "cross-linked" as required in Claims 1 and 15-19. None of the monomers described in the British Patent on Page 4 in the right hand column in lines 90-121, correspond to any of the cross-linking monomers described in appellants' US 4855127 in Column 3 lines 13-36. According to appellants' invention, a monofunctional monomer is combined with

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a difunctional monomer. Appellants fail to see wherein the British Patent teaches this concept as called for in the appealed Claims 1-4 and 15-19.

Finally, Claims 1 and 18 call for a "pheromone" to be entrapped in a polymer. Claims 13-17 and 19 call for particular pheromone compounds. The British Patent does not disclose pheromones or any of the particular compounds recited in the appealed Claims 13-17 and 19.

In view of these several differences between the claimed composition and what is taught in the British Patent, appellants are unable to see wherein the instant invention is unpatentable as concluded by the Examiner.

#### CONCLUSION

For the foregoing reasons, the Honorable Board of Appeals is requested to reverse the Examiner's rejection of Claims 1-19.

#### HEARING

An oral hearing is not requested.

Respectfully submitted,

DOW CORNING CORPORATION



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Enclosure

**APPENDIX**

**1. A solid pheromone entrapped composition comprising:**

**from approximately 5% to approximately 95% by weight of a cross-linked**

**hydrophobic comb-like polymer lattice;**

**from approximately 95% to about 5% by weight of a [solid] pheromone;**

**said monomers of said cross-linked polymer and said pheromone being**

**polymerized in situ;**

**said pheromone being dispersed uniformly throughout and entrapped within said**

**polymer lattice.**

**2. The composition as claimed in claim 1, wherein said cross-linked polymer matrix comprises:**

**a functional cross-linking monomer selected from the group consisting of a**

**difunctional monomer having at least two polymerizable double bonds and a**

**polyfunctional monomer having at least two polymerizable double bonds; and**

**a monofunctional monomer selected from the group consisting of polymerizable**

**monomers having one double bond.**

**3. The composition as claimed in claim 2, wherein said polyfunctional cross-linking monomer is a polyunsaturated monomer selected from the group consisting of a monoester of a monovalent alcohol, a monoester of a divalent alcohol, a monoester of a polyvalent alcohol, a diester of a monovalent alcohol, a diester of a divalent alcohol, a diester of a polyvalent alcohol, a polyester of a monovalent alcohol, a polyester of a**

divalent alcohol, a polyester of a polyvalent alcohol, and alpha-beta unsaturated carboxylic acid, polyunsaturated polyvinyl ether of a polyvalent alcohol, monosaturated amides polyunsaturated amides and cycloaliphatic esters of alpha-beta unsaturated carboxylic acids.

4. The composition as claimed in claim 2, wherein said monofunctional monomer is selected from the group consisting of hydrophobic monounsaturated monomers and hydrophylic monounsaturated monomers.

5. The composition as claimed in claim 1, including a pesticidal agent.

6. The composition as claimed in claim 5 wherein said pesticidal agent is a juvenile hormone analog.

7. The composition as claimed in claim 1 wherein said composition comprises free-flowing powders.

8. The composition as claimed in claim 1 wherein said composition comprises free-flowing beads.

9. The composition as claimed in claim 1 where said composition comprises a plug.

10. The composition as claimed in claim 1 wherein said plug is in cylinder form.

11. The composition as claimed in claim 4 wherein said monomers are alkyl methacrylates and acrylates having straight or branch chain alkyl groups with 1 to 30 carbon atoms.

12. The composition as claimed in claim 11 wherein said monomers are selected from the group consisting of lauryl methacrylate, 2-ethylhexyl methacrylate, isodecylmethacrylamide, diacetone acrylamide and methoxy ethyl methacrylate.

13. The composition of claim 1 wherein said pheromone is cis-2-isopropylpentyl-1-methyl-cyclobutane-ethanol.

14. The composition of claim 1 wherein said pheromone is 1,1-dimethyl-chloro-2-methylcyclohexane-1-carboxylate.

15. A solid pheromone entrapped composition comprising from approximately 5 % to approximately 95 % by weight of a cross-linked hydrophobic comb-like polymer lattice; from approximately 95 % to about 5 % by weight of the compound cis-2-isopropylpentyl-1-methyl-cyclobutane-ethanol; monomers of said cross-linked polymer and said compound being polymerized in situ; said compound being dispersed uniformly throughout and entrapped within said polymer lattice.



16. A solid pheromone entrapped composition comprising from approximately 5 % to approximately 95 % by weight of a cross-linked hydrophobic comb-like polymer lattice; from approximately 95 % to about 5 % by weight of the compound 1,1-dimethyl-chloro-2-methylcyclohexane-1-carboxylate; monomers of said cross-linked polymer and said compound being polymerized in situ; said compound being dispersed uniformly throughout and entrapped within said polymer lattice.

17. A solid pheromone entrapped composition comprising from approximately 5 % to approximately 95 % by weight of a cross-linked hydrophobic comb-like polymer lattice; from approximately 95 % to about 5 % by weight of a compound selected from the group consisting of 1,1-dimethyl-4-chloro-2-methylcyclohexane-1-carboxylate, 1,1-dimethyl-5-chloro-2-methylcyclohexane-1-carboxylate, cis-2-isopropylpentyl-1-methyl-cyclobutane-ethanol, medlure, siglure, butyl sorbate, cue-lure, and methyl eugenol; monomers of said cross-linked polymer and said compound being polymerized in situ; said compound being dispersed uniformly throughout and entrapped within said polymer lattice.

18. A solid pheromone entrapped composition comprising from approximately 5 % to approximately 95 % by weight of a cross-linked hydrophobic comb-like polymer lattice; from approximately 95 % to about 5 % by weight of a compound which is a water insoluble liquid pheromone or synthetic attractant; monomers of said cross-linked polymer and said compound being polymerized in situ; said compound being dispersed uniformly throughout and entrapped within said polymer lattice.

19. A solid pheromone entrapped composition comprising from approximately 5 % to approximately 95 % by weight of a cross-linked hydrophobic comb-like polymer lattice; from approximately 95 % to about 5 % by weight of a compound selected from the group consisting of grandlure, trimedlure, methyl eugenol, and cuelure-malathion; monomers of said cross-linked polymer and said compound being polymerized in situ; said compound being dispersed uniformly throughout and entrapped within said polymer lattice.

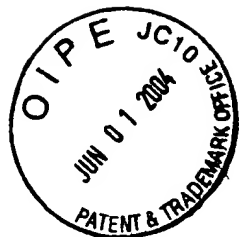
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CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner of Patents & Trademarks, Washington, D.C. 20231.

Date: 9-14-94

Jim De Cesare



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Eric S Abrutyn; Louis J. Scarfo; Richard C Chromecek;  
Serial No.: 0 8 / 058,163 Group No.: 1203  
Filed: 5/4/93 Examiner: Dale R. Ore  
For: LATTICE-ENTRAPPED COMPOSITION

JUN 2 2004  
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Washington, D.C. 20231

**TRANSMITTAL OF APPEAL BRIEF (PATENT APPLICATION—37 CFR 192)**

1. Transmitted herewith in triplicate is the **APPEAL BRIEF** in this application with respect to the Notice of Appeal filed on concurrently

NOTE: "The appellant shall, within 2 months from the date of the notice of appeal under § 1.191 in an application, reissue application, or patent under reexamination, or within the time allowed for response to the action appealed from, if such time is later, file a brief in triplicate." 37 CFR 1.192(a) [emphasis added].

**2. STATUS OF APPLICANT**

This application is on behalf of

☒ other than a small entity

☐ small entity

verified statement:

☐ attached

☐ already filed

**3. FEE FOR FILING APPEAL BRIEF**

Pursuant to 37 CFR 1.17(f) the fee for filing the Appeal Brief is:

☐ small entity \$135.00

☒ other than a small entity \$270.00

Appeal Brief fee due \$ 270.00

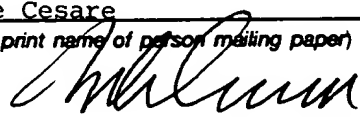
**CERTIFICATE OF MAILING (37 CFR 1.8(a))**

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Jim De Cesare

(type or print name of person mailing paper)

Date: 9-14-94

  
(Signature of person mailing paper)

**4. EXTENSION OF TERM**

*NOTE: The time periods set forth in 37 CFR 1.192(a) are subject to the provision of § 1.136 for patent applications. 37 CFR 1.191(d). Also see Notice of November 5, 1985 (1060 O.G. 27).*

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136 apply.

*(complete (a) or (b) as applicable)*

- (a) ☐ Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

Extension (months)	Fee for other than small entity	Fee for small entity
<input type="checkbox"/> one month	\$110.00	\$55.00
<input type="checkbox"/> two months	\$360.00	\$180.00
<input type="checkbox"/> three months	\$840.00	\$420.00
<input type="checkbox"/> four months	\$1,320.00	\$660.00

Fee \$\_\_\_\_\_

If an additional extension of time is required, please consider this a petition therefor.

*(check and complete the next item, if applicable)*

- ☐ An extension for \_\_\_\_\_ months has already been secured and the fee paid therefor of \$\_\_\_\_\_ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$\_\_\_\_\_

or

- (b) ☒ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

**5. TOTAL FEE DUE**

The total fee due is:

Appeal brief fee \$270.00

Extension fee (if any) \$\_\_\_\_\_

TOTAL FEE DUE \$270.00

**6. FEE PAYMENT**

- ☐ Attached is a check in the sum of \$\_\_\_\_\_.  
☒ Charge Account No. 04-1520 the sum of \$270.00.

A duplicate of this transmittal is attached.

**7. FEE DEFICIENCY**

*NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to change the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G. 31-33.*

☒ If any additional extension and/or fee is required, this is a request therefor and to charge Account No. 04-1520

AND/OR

☒ If any additional fee for claims is required, charge Account No. 04-1520



SIGNATURE OF ATTORNEY

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Jim De Cesare

(type or print name of attorney)

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